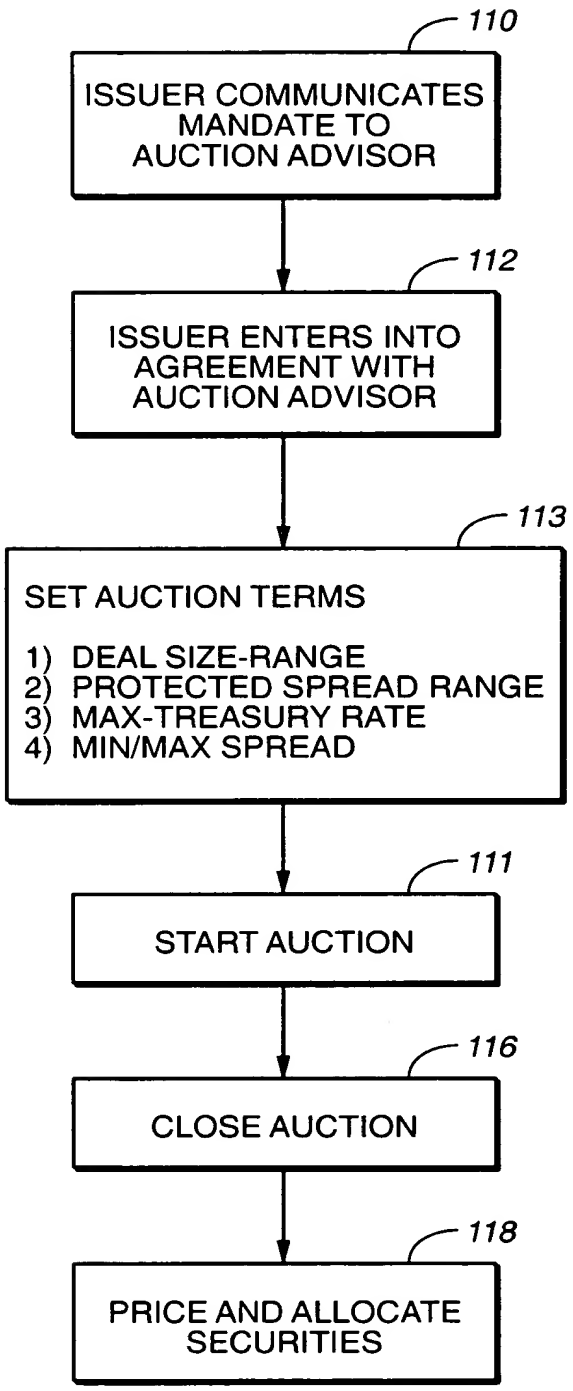

110
ISSUER COMMUNICATES MANDATE TO AUCTION ADVISOR
112
ISSUER ENTERS INTO AGREEMENT WITH AUCTION ADVISOR
113
SET AUCTION TERMS
1) DEAL SIZE-RANGE
2) PROTECTED SPREAD RANGE
3) MAX-TREASURY RATE
4) MIN/MAX SPREAD
111
START AUCTION
116
CLOSE AUCTION
118
PRICE AND ALLOCATE SECURITIES

FIG._1

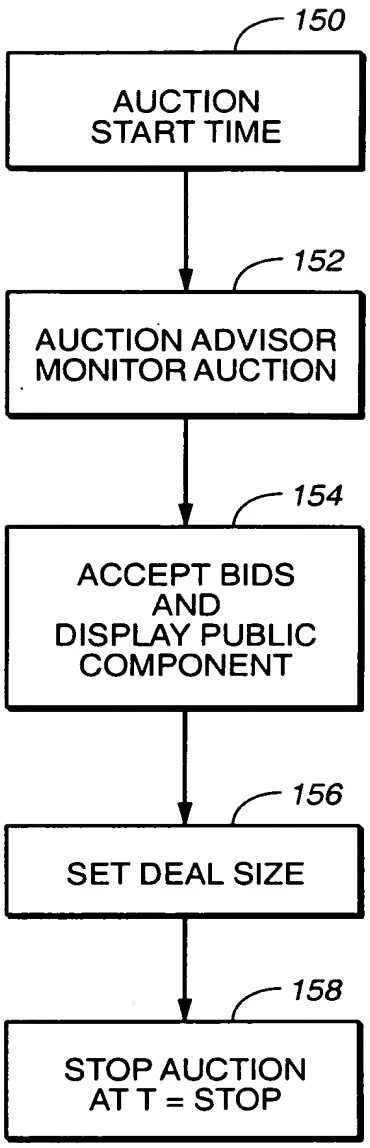

150
AUCTION START TIME
152
AUCTION ADVISOR MONITOR AUCTION
154
ACCEPT BIDS AND DISPLAY PUBLIC COMPONENT
156
SET DEAL SIZE
158
STOP AUCTION AT T = STOP

FIG._2

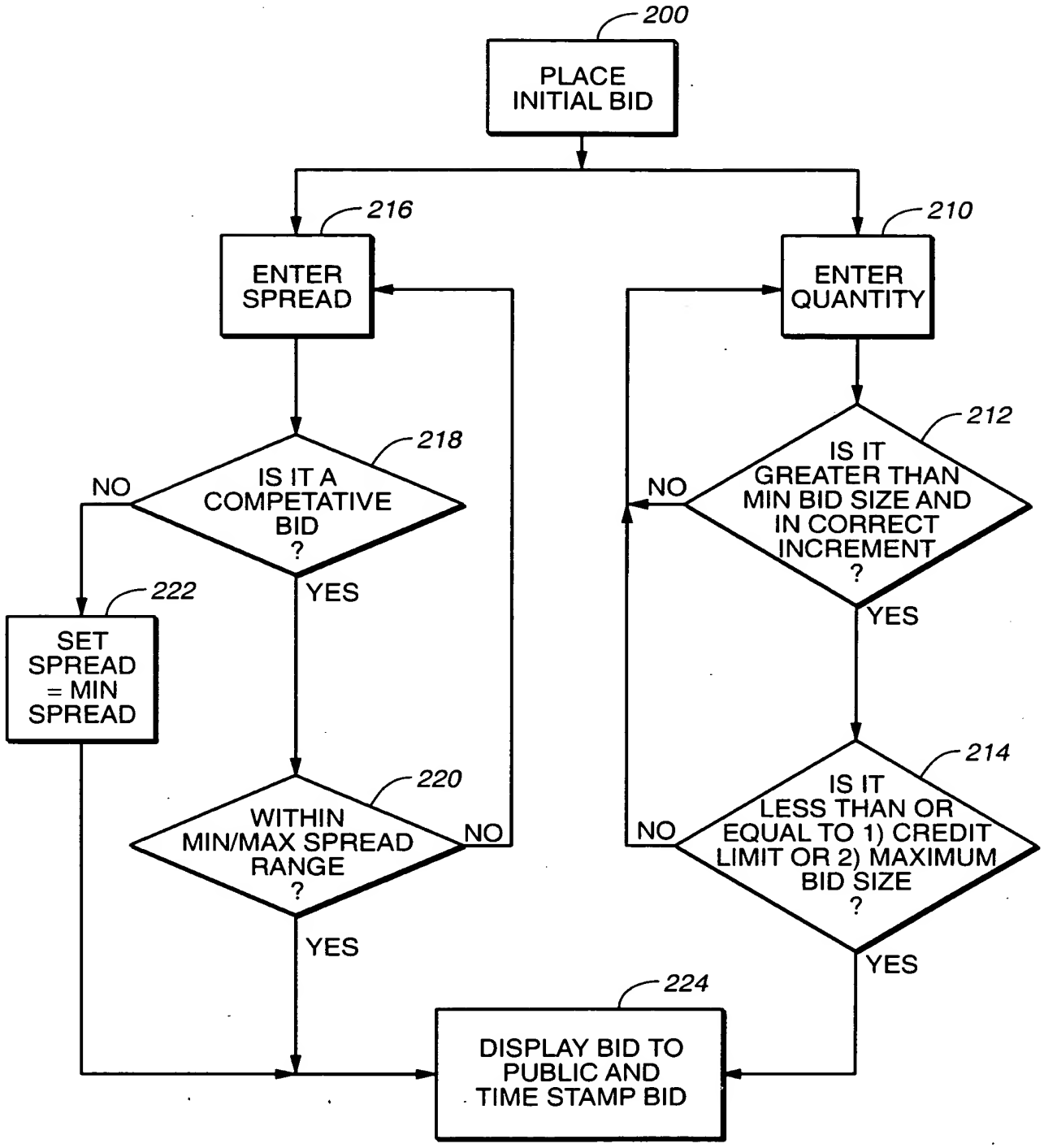

200
PLACE INITIAL BID
216
ENTER SPREAD
210
ENTER QUANTITY
218
IS IT A COMPETATIVE BID ?
NO
YES
222
SET SPREAD = MIN SPREAD
212
IS IT GREATER THAN MIN BID SIZE AND IN CORRECT INCREMENT ?
NO
YES
220
WITHIN MIN/MAX SPREAD RANGE ?
NO
YES
214
IS IT LESS THAN OR EQUAL TO 1) CREDIT LIMIT OR 2) MAXIMUM BID SIZE ?
NO
YES
224
DISPLAY BID TO PUBLIC AND TIME STAMP BID

FIG._3

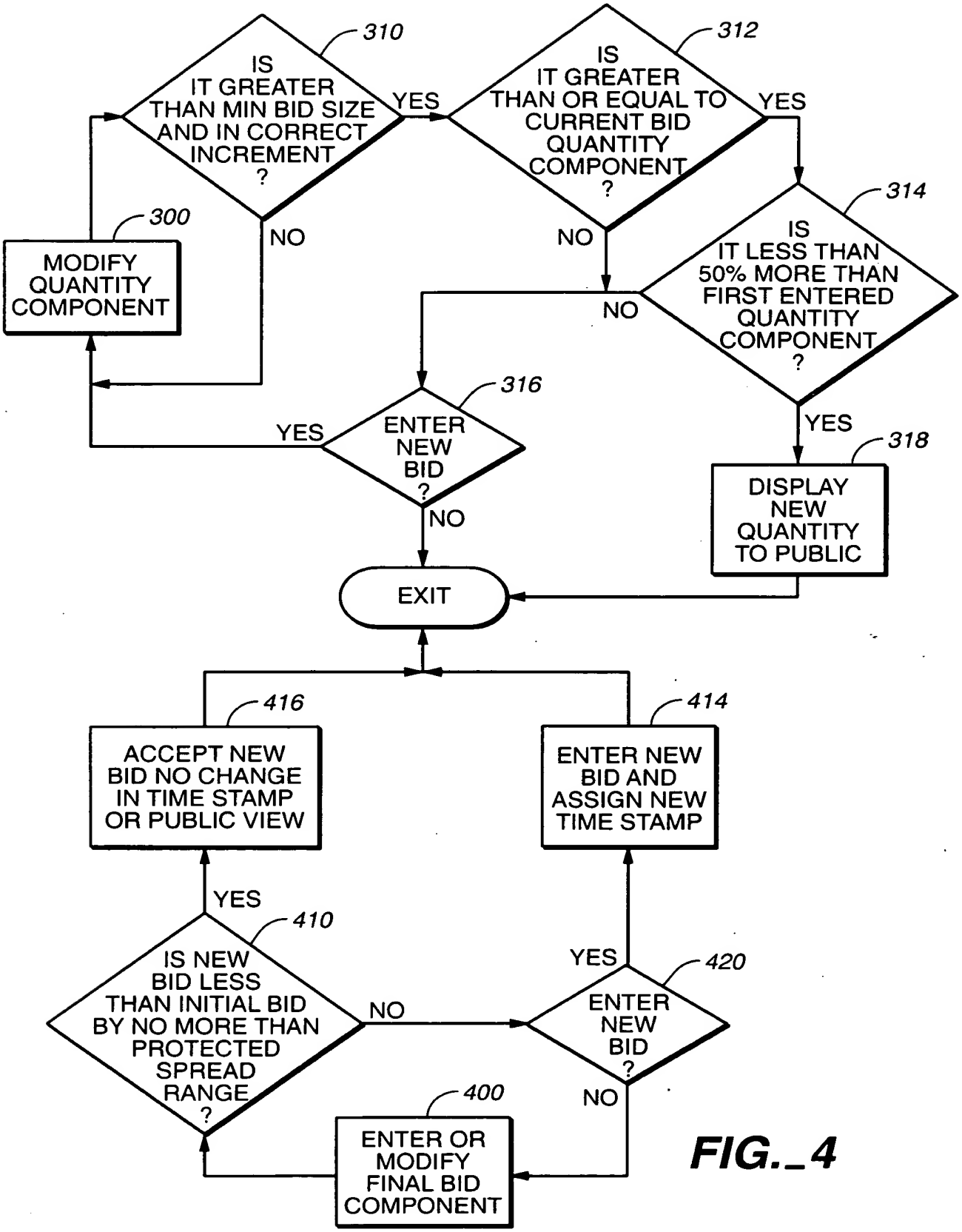

310
IS IT GREATER THAN MIN BID SIZE AND IN CORRECT INCREMENT ?
YES
312
IS IT GREATER THAN OR EQUAL TO CURRENT BID QUANTITY COMPONENT ?
YES
NO
300
MODIFY QUANTITY COMPONENT
NO
314
IS IT LESS THAN 50% MORE THAN FIRST ENTERED QUANTITY COMPONENT ?
NO
316
ENTER NEW BID ?
YES
YES
318
DISPLAY NEW QUANTITY TO PUBLIC
NO
EXIT
416
ACCEPT NEW BID NO CHANGE IN TIME STAMP OR PUBLIC VIEW
414
ENTER NEW BID AND ASSIGN NEW TIME STAMP
YES
410
IS NEW BID LESS THAN INITIAL BID BY NO MORE THAN PROTECTED SPREAD RANGE ?
NO
YES
420
ENTER NEW BID ?
NO
400
ENTER OR MODIFY FINAL BID COMPONENT

FIG._4

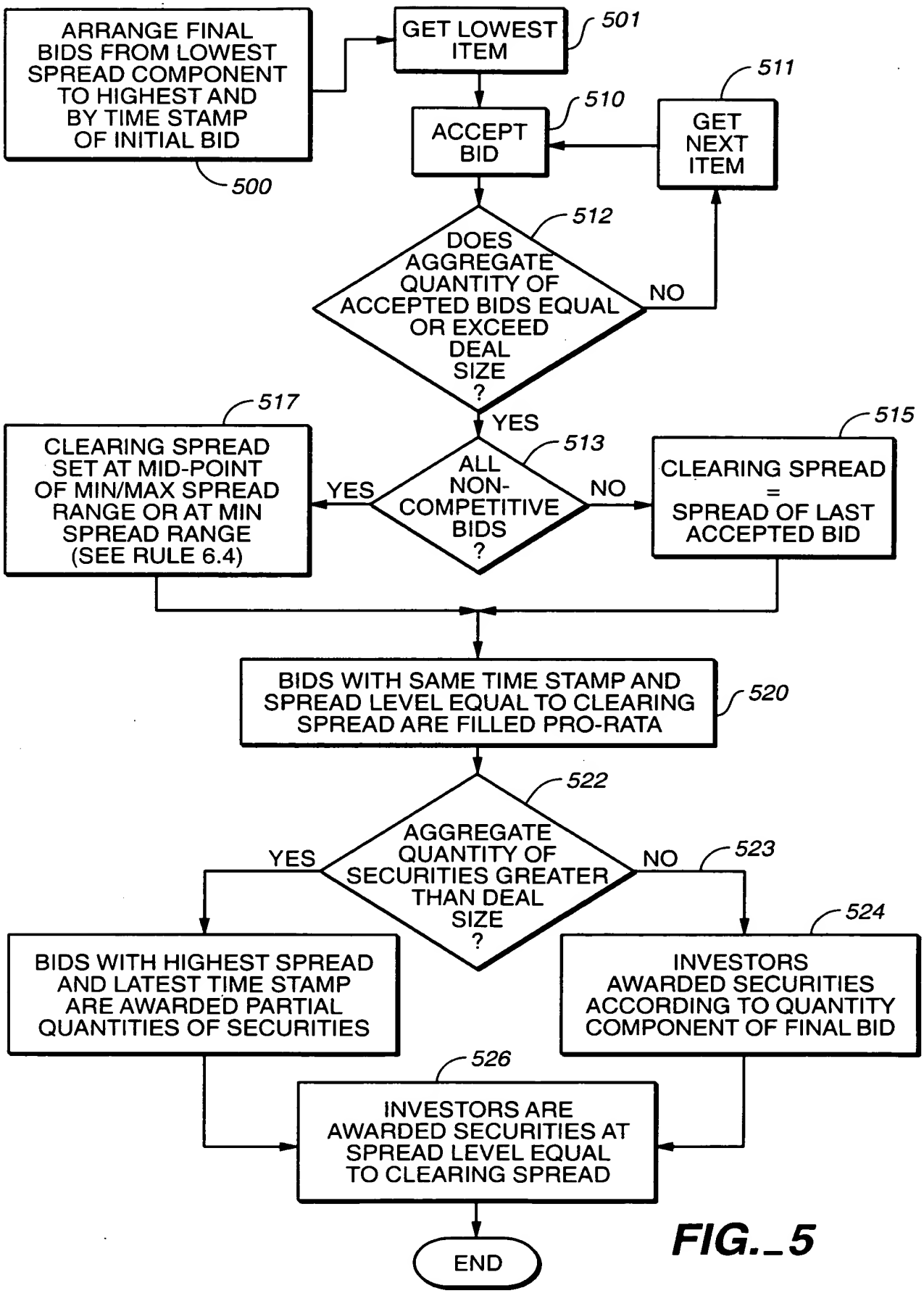

ARRANGE FINAL BIDS FROM LOWEST SPREAD COMPONENT TO HIGHEST AND BY TIME STAMP OF INITIAL BID
500
GET LOWEST ITEM
501
ACCEPT BID
510
GET NEXT ITEM
511
DOES AGGREGATE QUANTITY OF ACCEPTED BIDS EQUAL OR EXCEED DEAL SIZE ?
512
NO
YES
ALL NON-COMPETITIVE BIDS ?
513
YES
NO
CLEARING SPREAD SET AT MID-POINT OF MIN/MAX SPREAD RANGE OR AT MIN SPREAD RANGE (SEE RULE 6.4)
517
CLEARING SPREAD = SPREAD OF LAST ACCEPTED BID
515
BIDS WITH SAME TIME STAMP AND SPREAD LEVEL EQUAL TO CLEARING SPREAD ARE FILLED PRO-RATA
520
AGGREGATE QUANTITY OF SECURITIES GREATER THAN DEAL SIZE ?
522
YES
NO
523
BIDS WITH HIGHEST SPREAD AND LATEST TIME STAMP ARE AWARDED PARTIAL QUANTITIES OF SECURITIES
INVESTORS AWARDED SECURITIES ACCORDING TO QUANTITY COMPONENT OF FINAL BID
524
INVESTORS ARE AWARDED SECURITIES AT SPREAD LEVEL EQUAL TO CLEARING SPREAD
526
END

FIG._5

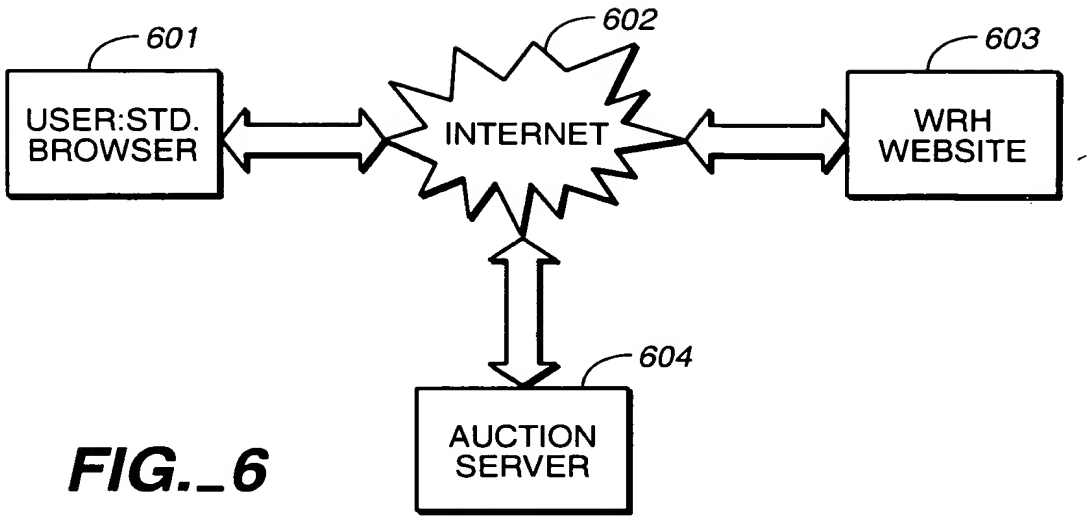

601
USER:STD. BROWSER
602
INTERNET
603
WRH WEBSITE
604
AUCTION SERVER

FIG._6

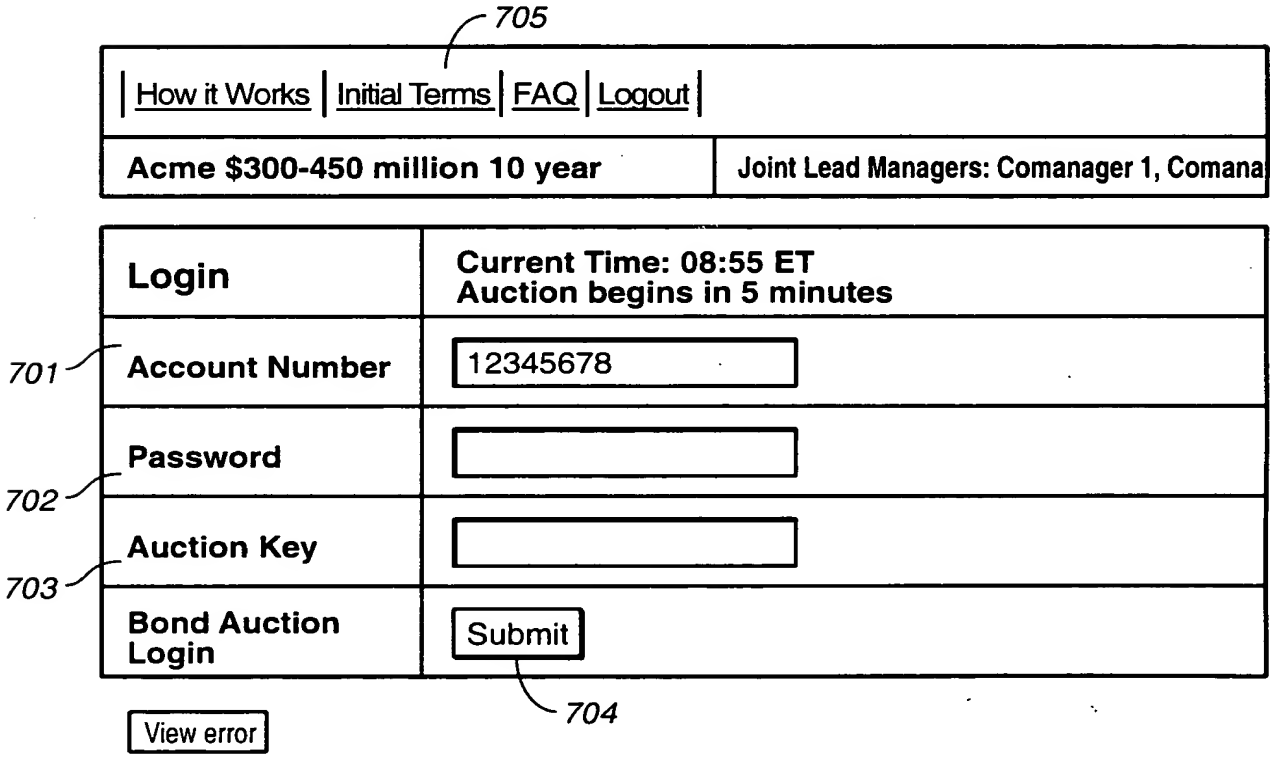

705
How it Works
Initial Terms
FAQ
Logout
Acme $300-450 million 10 year
Joint Lead Managers: Comanager 1, Comana
Login
Current Time: 08:55 ET
Auction begins in 5 minutes
701
Account Number
12345678
Password
702
Auction Key
703
Bond Auction Login
Submit
704
View error

FIG._7

801 802

Acme $300-450 million 10 year Joint Lead Managers: Comanager 1, Comanager 2	
Initial Terms	
Issuer	Acme Explosives
Issue Size	US$300,000,000 to $450,000,000 (final size set 9/21/99 at 10:00AM ET)
Maturity	September 15, 2009
Coupon Rate	Determined by auction as the sum of the benchmark treasury and the auction-clearing spread, rounded down to the nearest 1/8%
Settlement Date	September 24, 1999
Settlement Terms	Flat
Type of Issue	Public
Coupon Dates	March 15; September 15
Structure	Make Whole +20
Format	Book entry DTC
Rating	Moody's A1; S&P A+
Benchmark Treasury	6% August 2009
Maximum Benchmark Rate	6.2% (auction cancelled if benchmark yield exceeds this rate)
Minimum/Maximum Spread	95/105 basis points over benchmark
Protected Spread	4 bps
Auction Date/Time	September 21, 1999, 9:00AM-11:00AM ET
Pricing Date/Time	September 21, 1999, 11:30AM ET
Maximum Purchase Limit	The lower of your WR Hambrecht credit limit or $75,000,000
Minimum/Multiple	$1,000/$1,000
Listed	NYSE
Soft Dollar Terms	20% on all winning bids time-stamped before 9:30AM ET, 5% on all others
Co-Managers	Co-Manager 1, Co-Manager 2
S lling Concession	$1.50

FIG._8

How it Works | Initial Terms | FAQ | Logout	
Acme $300-450 million 10 year	**Joint Lead Managers: Comanager 1, Comana**

Current Bid Status		
	Current	**Submit**
Competitive Bid		
Time Stamp	**None**	
Size (millions)	**$0.000**	$ 00 . 000
Initial Bid	**None**	Select Spread
Final Bid	**None**	Select Spread
Non-Competitive Bid		
Time Stamp	**None**	
Size (millions)	**$0.000**	$ 00 . 000
Max Bid	**$75 million**	Submit Bid

Current Time 8:55AM ET

901

Auction Progress

The Auction will start in 5 Minutes

<start page will appear automatically at 0 minutes>

Bids will not be accepted until the auction begins

Pricing Rationale

Auction Details	
Auction Start	9:00 AM ET
Auction Finish	11:00 AM ET
Min/Max Spread	95 - 105 bps
Protected Spread Range	4 bps
Benchmark Treasury	6% 08/09

902 903 904 905 906 907

FIG._9

How it Works | Initial Terms | FAQ | Logout

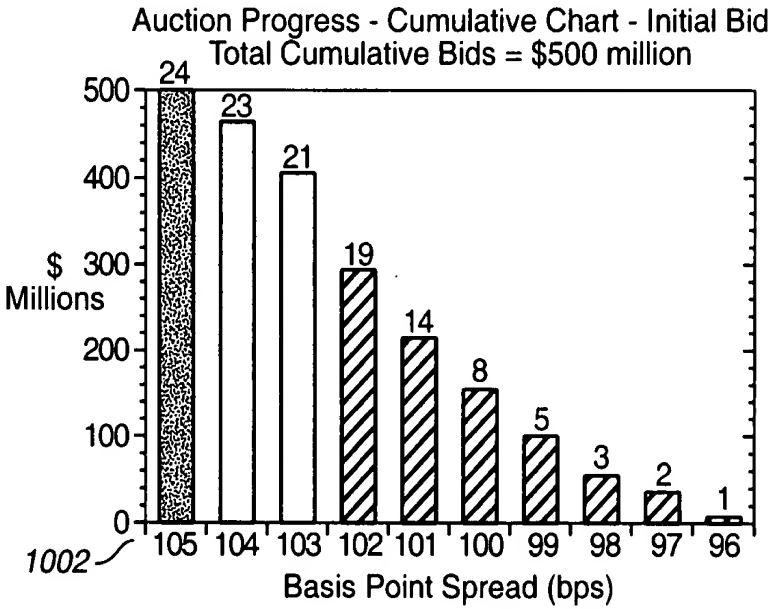
Acm $300-450 million 10 year — **Joint Lead Managers: Comanager 1, Comana**

Place Bid

	Current	Submit
Competitive Bid		
Time Stamp	None	
Size (millions)	$0.000	$ 25 . 125
Initial Bid	None	Select Spread
Final Bid	None	Select Spread
Non-Competitive Bid		
Time Stamp	None	
Size (millions)	$0.000	$ 10 . 125
Max Bid (millions)	$75.000	Submit Bid

901

Current Time 9:25 ET
Time Remaining 95 minutes



1001 Nominal Chart | Bid Data | Explanation of Ch

902

Auction Details	
Auction Start	9:00 AM ET
Auction Finish	11:00 AM ET
Min/Max Spread	95 - 105 bps
Protected Spread Range	4 bps
Benchmark Treasury	6% 08/09

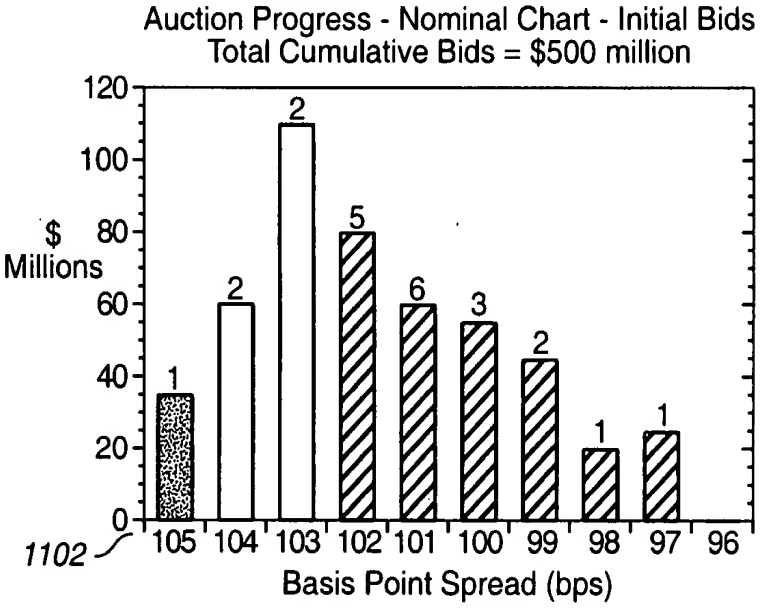
906

FIG._10

How it Works | Initial Terms | FAQ | Logout	
Acme $300-450 million 10 year	**Joint Lead Managers: Comanager 1, Comana**

Place Bid		
	Current	**Submit**
Competitive Bid		
Time Stamp	**None**	
Size (millions)	**$0.000**	$ 25 . 125
Initial Bid	**None**	Select Spread ▽
Final Bid	**None**	Select Spread ▽
Non-Competitive Bid		
Time Stamp	**None**	
Size (millions)	**$0.000**	$ 10 . 125
Max Bid (millions)	**$75.000**	Submit Bid

Current Time 9:25 ET
Time Remaining 95 minutes



Auction Details	
Auction Start	9:00 AM ET
Auction Finish	11:00 AM ET
Min/Max Spread	95 - 105 bps
Protected Spread Range	4 bps
Benchmark Treasury	6% 08/09

FIG._11

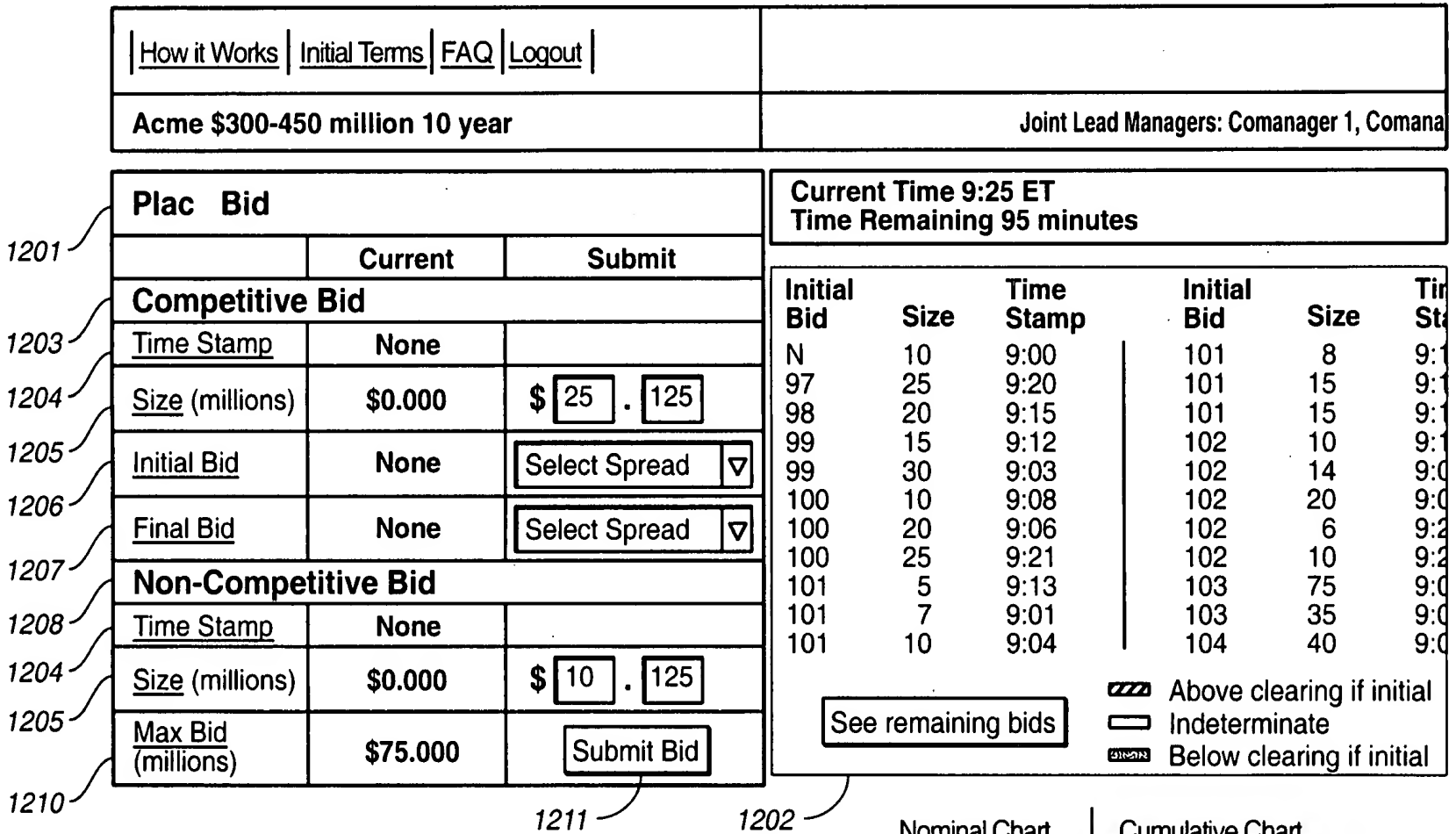


FIG._12

Auction Details	
Auction Start	9:00 AM ET
Auction Finish	11:00 AM ET
Min/Max Spread	95 - 105 bps
Protected Spread Range	4 bps
Benchmark Treasury	6% 08/09

906

How it Works | Initial Terms | FAQ | Logout	
Acme $300-450 million 10 year	**Joint Lead Managers: Comanager 1, Comana**

1301

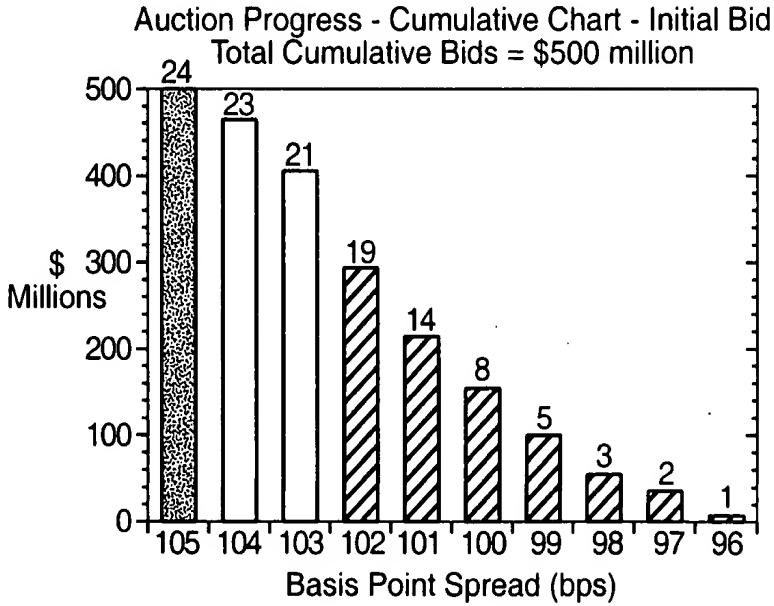
Please Confirm Bid

Click Confirm Bid to verify.

	Current	New Bid
Competitive Bid		
Time Stamp	None	Assigned on Confirmation
Size (millions)	$0.000	$25.125
Initial Bid	None	104 bps
Final Bid	None	103 bps
Non-Competitive Bid		
Time Stamp	None	Assigned on Confirmation
Size (millions)	$0.000	$10.125
Max Bid (millions)	$75.000	
	Back	Confirm Bid

1302 1303

Current Time 9:25 ET
Time Remaining 95 minutes



Nominal Chart | Bid Data | Explanation of Ch

Auction Details	
Auction Start	9:00 AM ET
Auction Finish	11:00 AM ET
Min/Max Spread	95 - 105 bps
Protected Spread Range	4 bps
Benchmark Treasury	6% 08/09

FIG._13

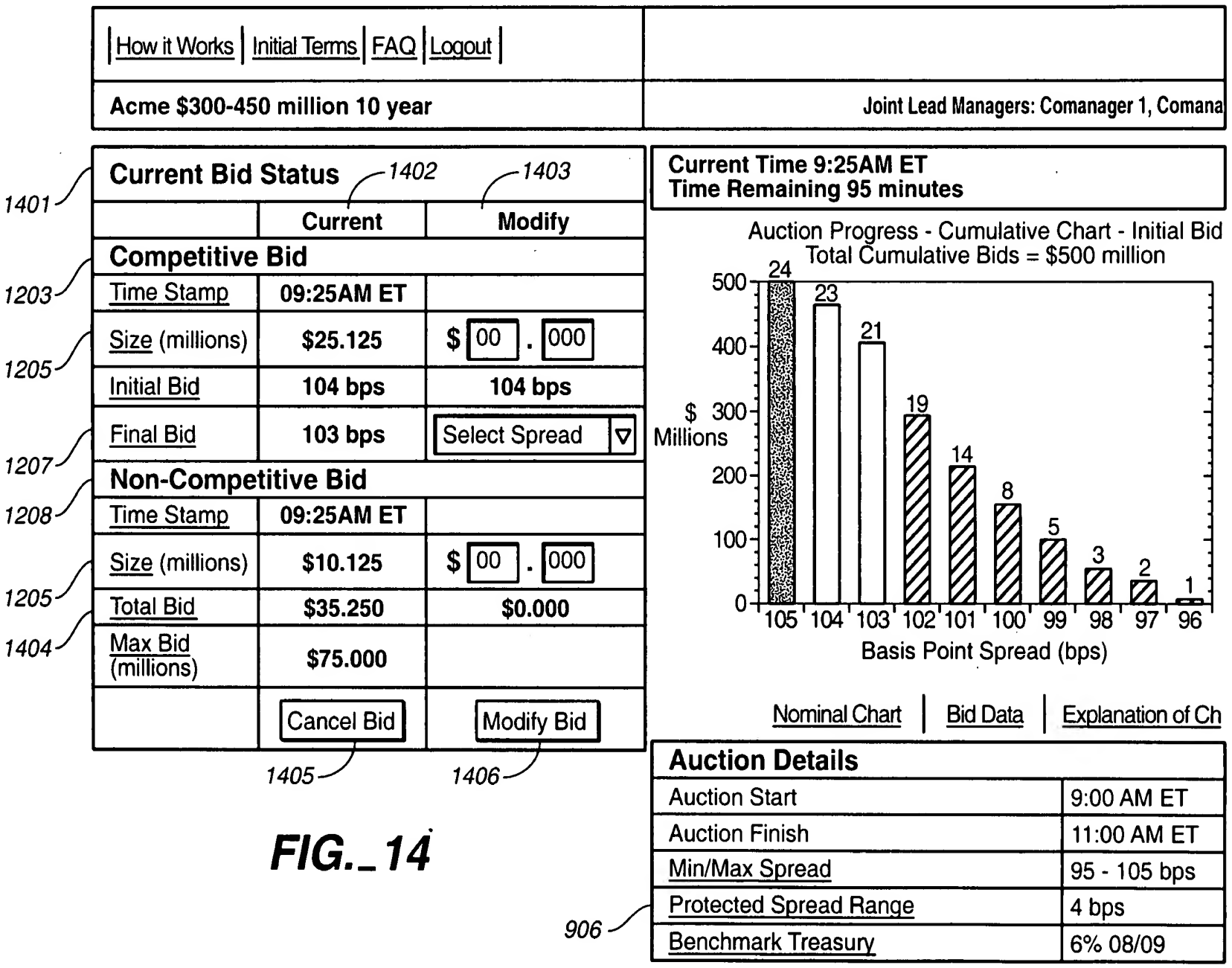

How it Works | Initial Terms | FAQ | Logout
Acme $300-450 million 10 year
Joint Lead Managers: Comanager 1, Comana
Current Bid Status
1401
1402
1403
Current
Modify
Competitive Bid
1203
Time Stamp
09:25AM ET
1205
Size (millions)
$25.125
$ 00 . 000
Initial Bid
104 bps
104 bps
1207
Final Bid
103 bps
Select Spread
Non-Competitive Bid
1208
Time Stamp
09:25AM ET
1205
Size (millions)
$10.125
$ 00 . 000
1404
Total Bid
$35.250
$0.000
Max Bid (millions)
$75.000
Cancel Bid
Modify Bid
1405
1406
Current Time 9:25AM ET
Time Remaining 95 minutes
Auction Progress - Cumulative Chart - Initial Bid
Total Cumulative Bids = $500 million
$ Millions
500
400
300
200
100
0
24
23
21
19
14
8
5
3
2
1
105 104 103 102 101 100 99 98 97 96
Basis Point Spread (bps)
Nominal Chart | Bid Data | Explanation of Ch
Auction Details
Auction Start
9:00 AM ET
Auction Finish
11:00 AM ET
Min/Max Spread
95 - 105 bps
Protected Spread Range
4 bps
Benchmark Treasury
6% 08/09
906

FIG._14

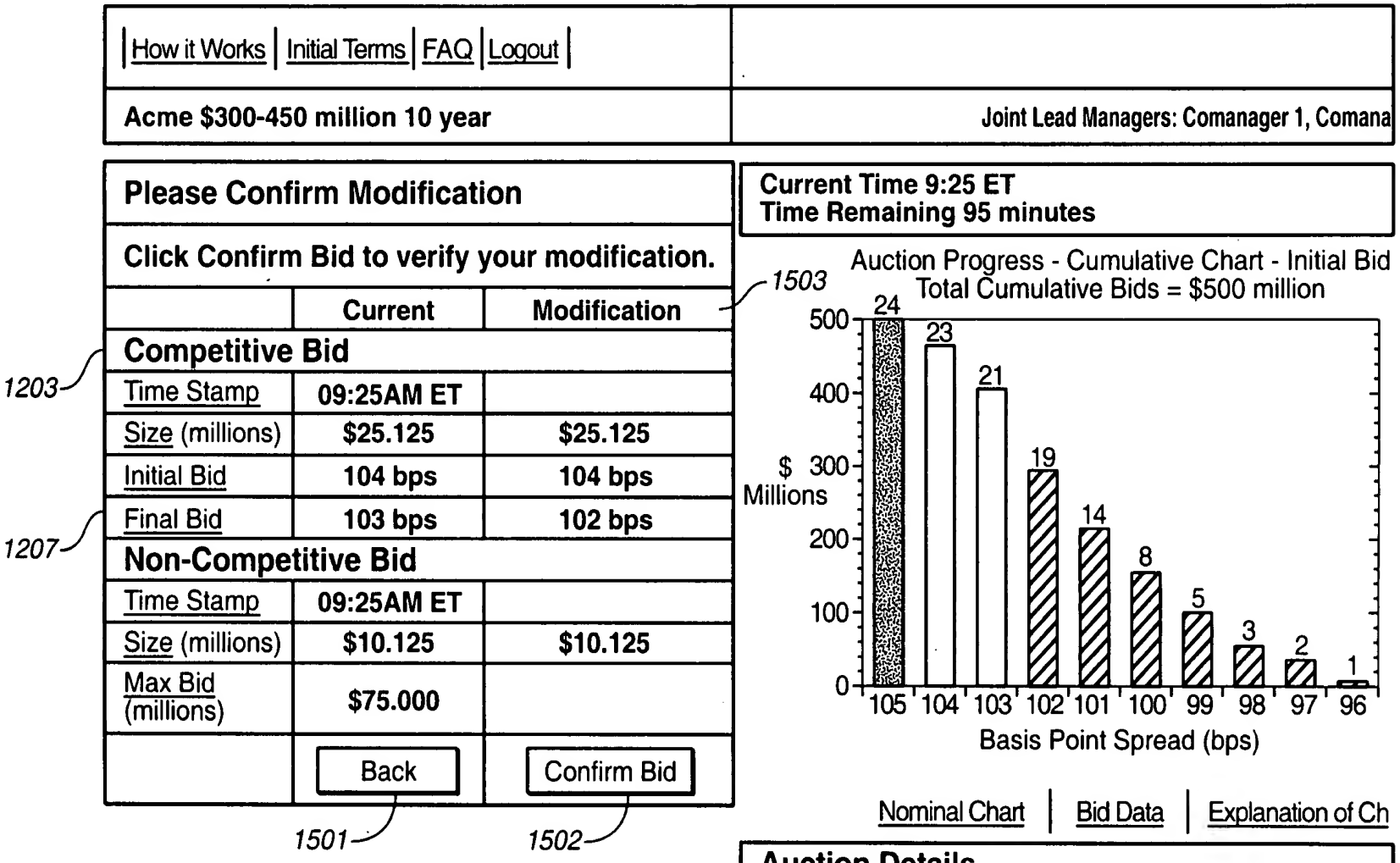

How it Works | Initial Terms | FAQ | Logout
Acme $300-450 million 10 year
Joint Lead Managers: Comanager 1, Comana
Please Confirm Modification
Click Confirm Bid to verify your modification.
Current
Modification
Competitive Bid
Time Stamp
09:25AM ET
Size (millions)
$25.125
$25.125
Initial Bid
104 bps
104 bps
Final Bid
103 bps
102 bps
Non-Competitive Bid
Time Stamp
09:25AM ET
Size (millions)
$10.125
$10.125
Max Bid (millions)
$75.000
Back
Confirm Bid
1203
1207
1501
1502
Current Time 9:25 ET
Time Remaining 95 minutes
1503
Auction Progress - Cumulative Chart - Initial Bid
Total Cumulative Bids = $500 million
$ Millions
500
400
300
200
100
0
24
23
21
19
14
8
5
3
2
1
105 104 103 102 101 100 99 98 97 96
Basis Point Spread (bps)
Nominal Chart | Bid Data | Explanation of Ch
Auction Details
Auction Start
9:00 AM ET
Auction Finish
11:00 AM ET
Min/Max Spread
95 - 105 bps
Protected Spread Range
4 bps
Benchmark Treasury
6% 08/09

FIG._15

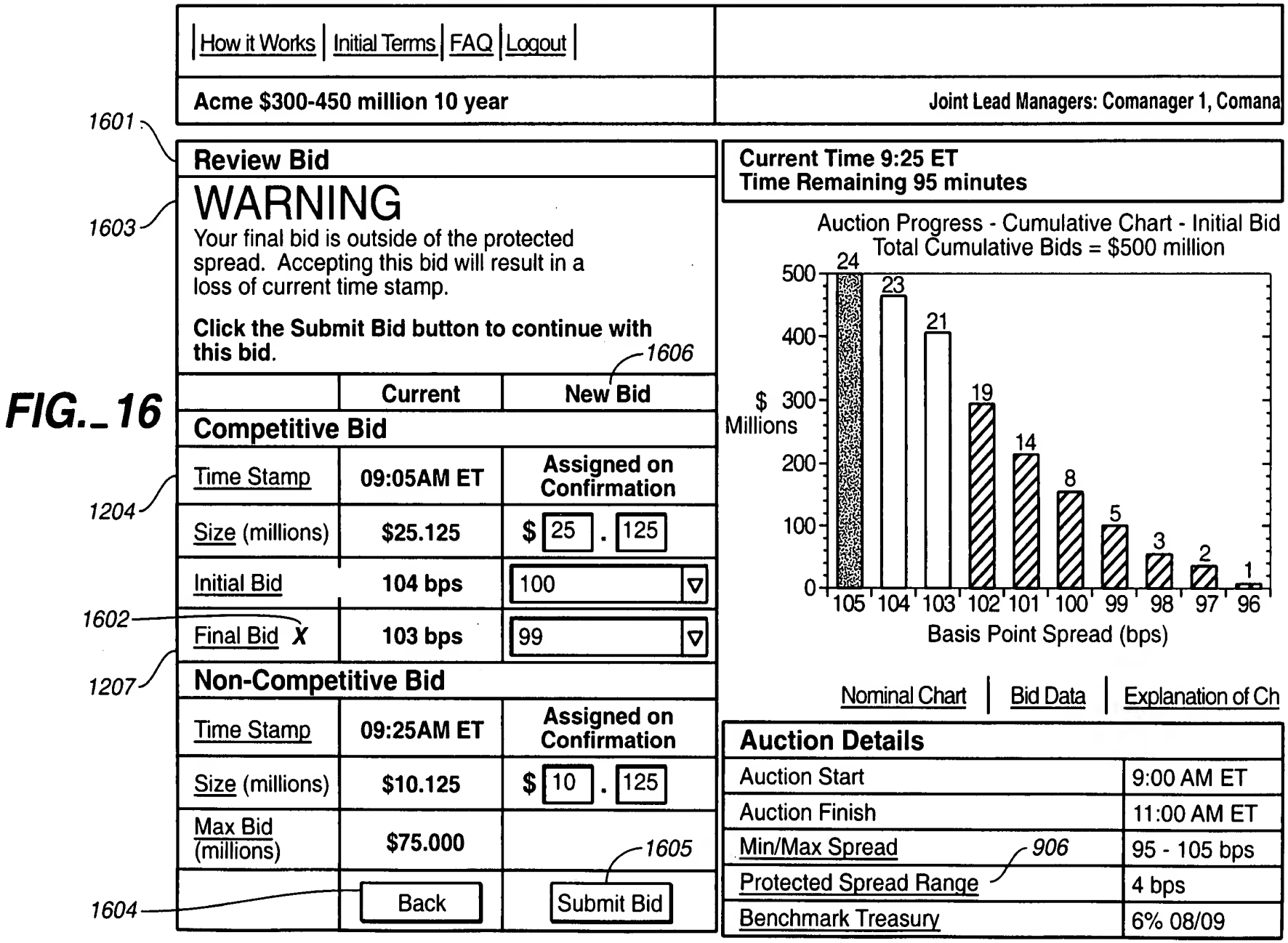

How it Works | Initial Terms | FAQ | Logout
Acme $300-450 million 10 year
Joint Lead Managers: Comanager 1, Comana
1601
Review Bid
1603
WARNING
Your final bid is outside of the protected spread. Accepting this bid will result in a loss of current time stamp.
Click the Submit Bid button to continue with this bid.
1606
Current
New Bid
Competitive Bid
Time Stamp
09:05AM ET
Assigned on Confirmation
1204
Size (millions)
$25.125
$ 25 . 125
Initial Bid
104 bps
100
1602
Final Bid X
103 bps
99
1207
Non-Competitive Bid
Time Stamp
09:25AM ET
Assigned on Confirmation
Size (millions)
$10.125
$ 10 . 125
Max Bid (millions)
$75.000
1605
1604
Back
Submit Bid
Current Time 9:25 ET
Time Remaining 95 minutes
Auction Progress - Cumulative Chart - Initial Bid
Total Cumulative Bids = $500 million
$ Millions
500
400
300
200
100
0
24
23
21
19
14
8
5
3
2
1
105 104 103 102 101 100 99 98 97 96
Basis Point Spread (bps)
Nominal Chart | Bid Data | Explanation of Ch
Auction Details
Auction Start
9:00 AM ET
Auction Finish
11:00 AM ET
Min/Max Spread
906
95 - 105 bps
Protected Spread Range
4 bps
Benchmark Treasury
6% 08/09

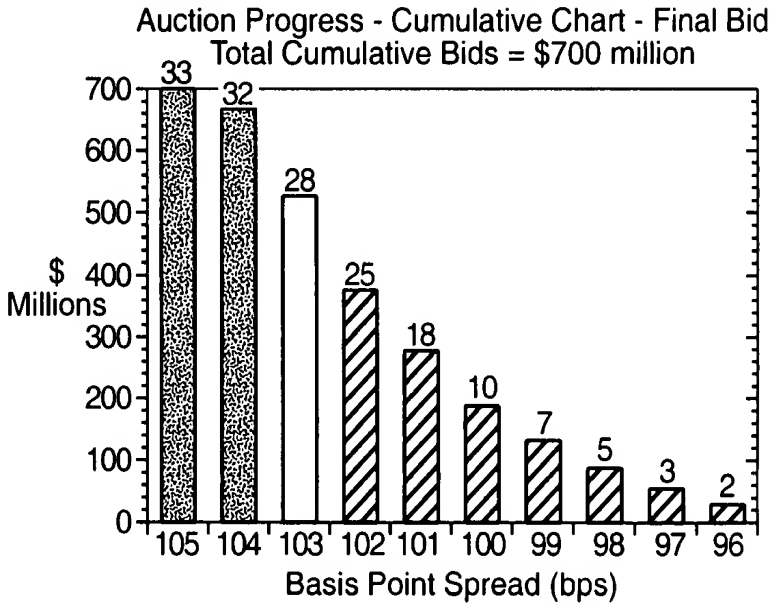
FIG._16

How it Works | Initial Terms | FAQ | Logout	
Acme $450 million 10 year	**Joint Lead Managers: Comanager 1, Comana**

Your Bid	
Total Successful Purchase:	**$35.250 million**
Soft Dollars Available on	**$7.05 million**
Size of benchmark for sale $ millions	$ 00 . 000
	Sell Treasuries
Must designate by 11:15. Settle to match new issue.	
Competitive	
Time Stamp	**09:25AM ET**
Size (millions)	**$25.125**
Initial Bid	**100 bps**
Final Bid	**99 bps**
Non-Competitive	
Time Stamp	**09:25AM ET**
Size (millions)	**$10.125**
Auction Results	
Clearing Spread	**103 bps**
Final Deal Size	**$450 million**
Time of Final Pricing	**11:30 AM ET**
Logout + Exit Auction	

1701 1704 1702 1703 1710 1705 1706 1707 1708

Current Time 11:03AM ET
Auction Over



Nominal Chart | Bid Data | Explanation of Ch

Auction Details	
Auction Start	9:00 AM ET
Auction Finish	11:00 AM ET
Min/Max Spread	95 - 105 bps
Protected Spread Range	4 bps
Benchmark Treasury	6% 08/09

Note: if you do not have an account with WR Hambrecht + Co, we will facilitate the bond trade for your introducing broker.
All settlement, clearing, and account maintenance will be handled by your introducing broker.

FIG._17

How it Works | Initial Terms | FAQ | Logout	
Acme $450 million 10 year	**Joint Lead Managers: Comanager 1, Comanager 2**

1801

Auction Results	
Your bid was not successful during this auction. Thank you for your participation.	
Clearing Spread	**103 bps**
Final Deal Size	**$450 million**
Time of Final Pricing	**11:30 AM ET**
Your Bid	
Time Stamp	**09:25 AM ET**
Size (millions)	**$25.125**
Initial Bid	**105 bps**
Final Bid	**104 bps**
	Logout + Exit Auction

1803

1802

Current Time 11:05 ET Acme $450 million 10 year Initial Terms	
Issuer	Acme Explosives
Issue Size	US$300,000,000 to $450,000,000 (final size set 9/21/99 at 10:00AM ET)
Maturity	September 15, 2009
Coupon Rate	Determined by auction as the sum of the benchmark treasury and the acution-clearing spread, rounded down to the nearest 1/8%
Settlement Date	September 24, 1999
Settlement Terms	Flat
Type of Issue	Public
Coupon Dates	March 15; September 15
Structure	Make Whole +20
Format	Book entry DTC
Rating	Moody's Aa1; S&P AA+
Benchmark Treasury	6% August 2009
Maximum Benchmark Rate	6.2% (auction cancelled if benchmark yield exceeds this rate)
Minimum/Maximum Spread	95/105 basis points over benchmark
Protected Spread	4 bps
Auction Date/Time	September 21, 1999, 9:00AM-11:00AM ET
Pricing Date/Tim	September 21, 1999, 11:30AM ET

FIG._18

Maximum Purchase Limit	The lower of your WR Hambrecht credit limit or $75,000,000
Minimum/Multiple	$1,000/$1,000
Listed	NYSE
Soft Dollar Terms	20% on all winning bids time-stamped before 9:30AM ET, 5% on all others
Co-Managers	Co-Manager 1, Co-Mangaer 2
Selling Concession	$1.50

FIG._19

How it Works | Initial Terms | FAQ | Logout	
Acme $300-450 million 10 year	**Joint Lead Managers: Comanager 1, Comana**

1201

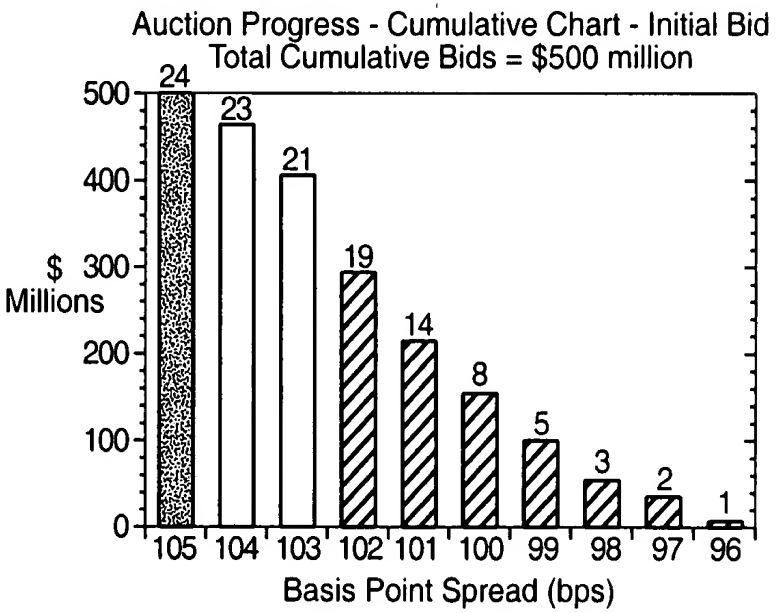
Place Bid

2001

ERROR: **Size of bid exceeds the maximum. Enter valid bid, then click Submit.**

	Current	Submit
Competitive Bid		
Time Stamp	09:25AM ET	
Size (millions) X	$25.125	$ 85 . 125
Initial Bid	104	Select Spread
Final Bid	103	Select Spread
Non-Competitive Bid		
Time Stamp	09:25AM ET	
Size (millions) X	$10.125	$ 10 . 125
Max Bid (millions)	$75.000	Submit

Current Time 9:25 ET
Time Remaining 95 minutes



Nominal Chart | Bid Data | Explanation of Ch

Auction Details	
Auction Start	9:00 AM ET
Auction Finish	11:00 AM ET
Min/Max Spread	95 - 105 bps
Protected Spread Range	4 bps
Benchmark Treasury	6% 08/09

FIG._20

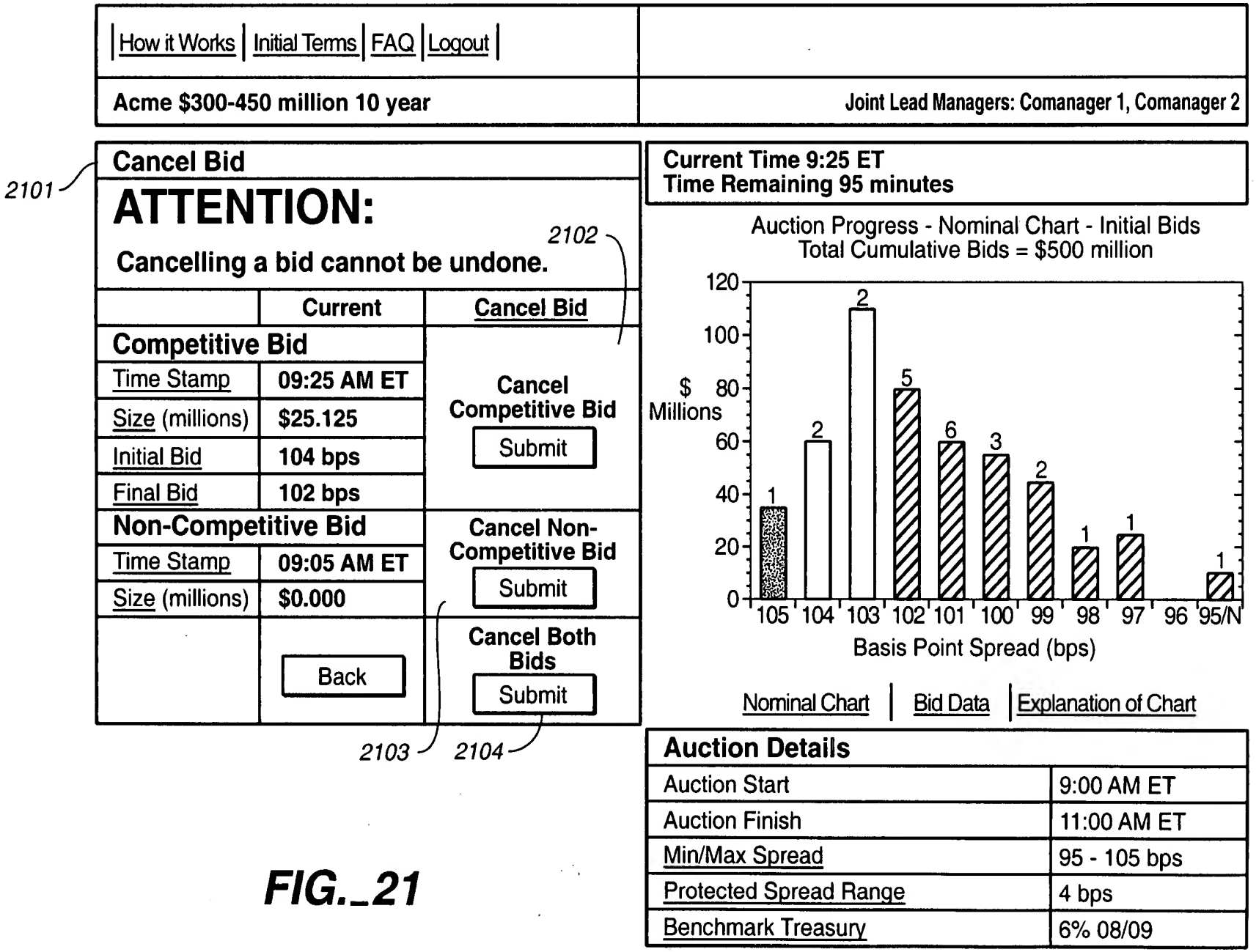

How it Works | Initial Terms | FAQ | Logout
Acme $300-450 million 10 year
Joint Lead Managers: Comanager 1, Comanager 2
2101
Cancel Bid
ATTENTION:
Cancelling a bid cannot be undone.
2102
Current
Cancel Bid
Competitive Bid
Time Stamp
09:25 AM ET
Size (millions)
$25.125
Initial Bid
104 bps
Final Bid
102 bps
Cancel Competitive Bid
Submit
Non-Competitive Bid
Time Stamp
09:05 AM ET
Size (millions)
$0.000
Cancel Non-Competitive Bid
Submit
Back
Cancel Both Bids
Submit
2103
2104
Current Time 9:25 ET
Time Remaining 95 minutes
Auction Progress - Nominal Chart - Initial Bids
Total Cumulative Bids = $500 million
$ Millions
120
100
80
60
40
20
0
1
2
2
5
6
3
2
1
1
1
105 104 103 102 101 100 99 98 97 96 95/N
Basis Point Spread (bps)
Nominal Chart | Bid Data | Explanation of Chart
Auction Details
Auction Start
9:00 AM ET
Auction Finish
11:00 AM ET
Min/Max Spread
95 - 105 bps
Protected Spread Range
4 bps
Benchmark Treasury
6% 08/09

FIG._21

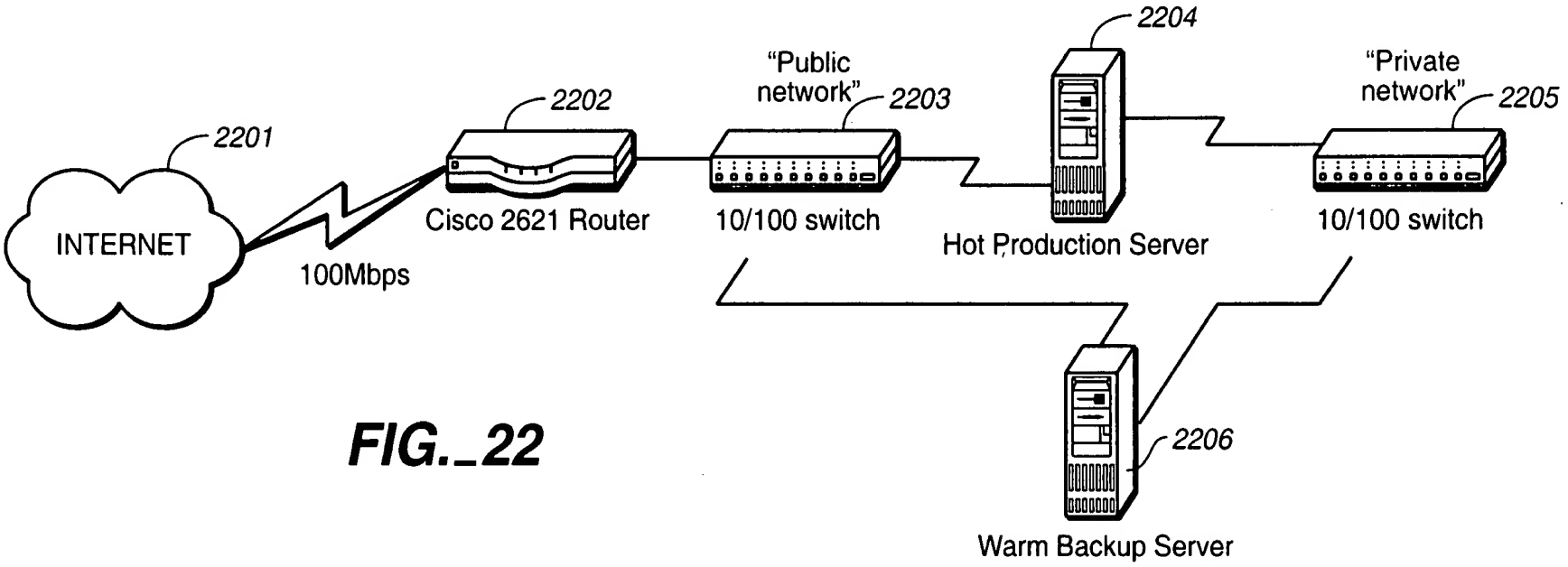

2201
INTERNET
100Mbps
2202
Cisco 2621 Router
"Public network"
2203
10/100 switch
2204
Hot Production Server
"Private network"
2205
10/100 switch
2206
Warm Backup Server

FIG._22

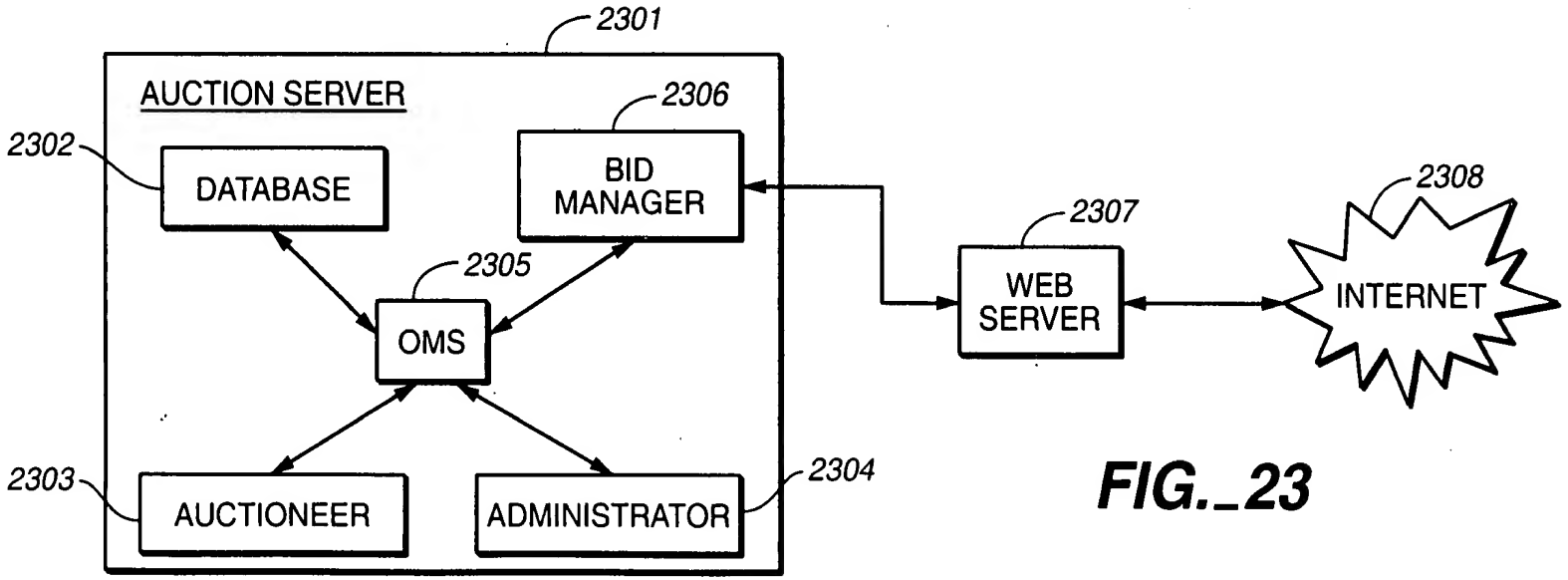

2301
AUCTION SERVER
2302
DATABASE
2306
BID MANAGER
2305
OMS
2303
AUCTIONEER
ADMINISTRATOR
2304
2307
WEB SERVER
2308
INTERNET

FIG._23

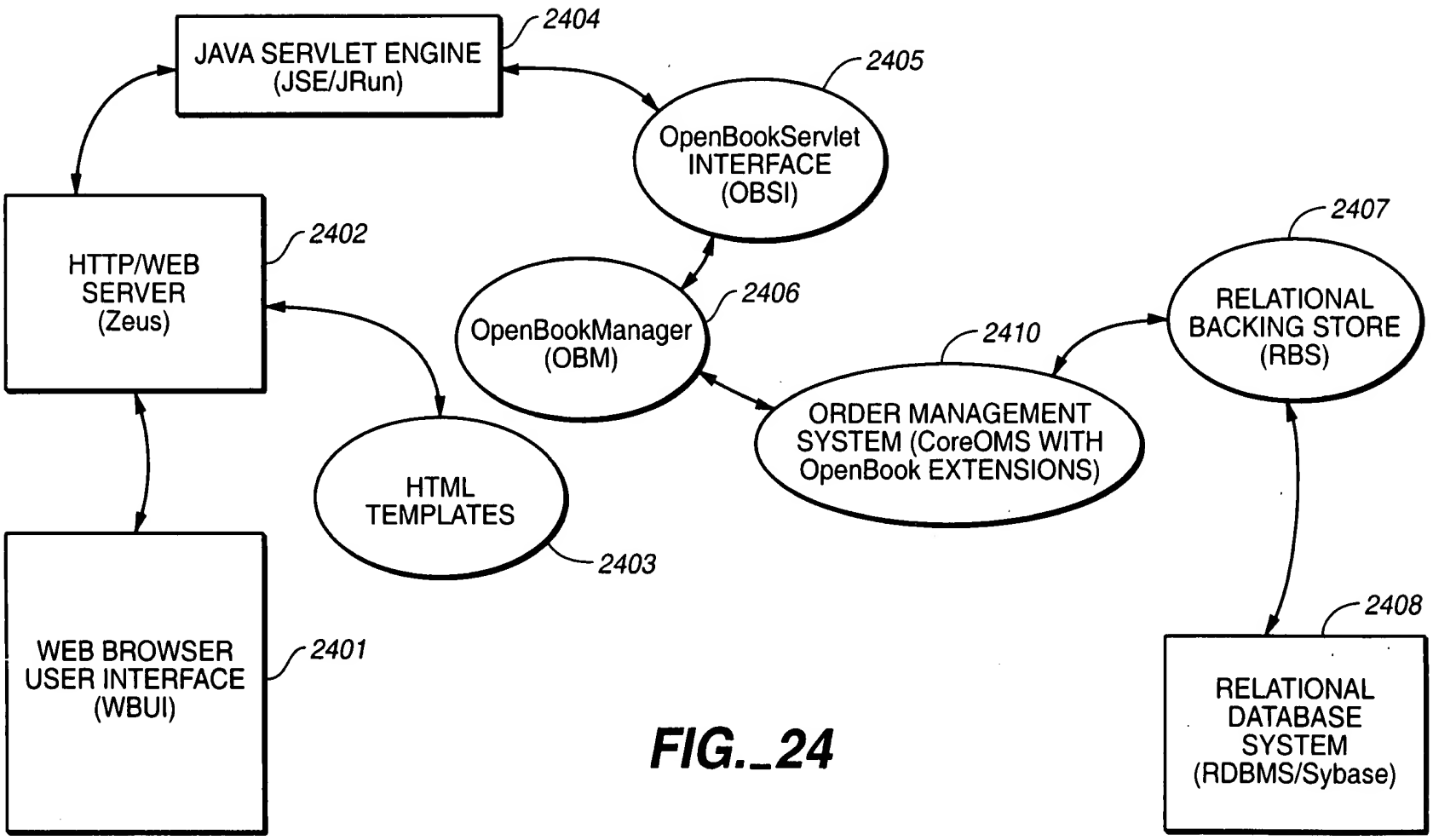

JAVA SERVLET ENGINE
(JSE/JRun)
2404
OpenBookServlet
INTERFACE
(OBSI)
2405
HTTP/WEB
SERVER
(Zeus)
2402
OpenBookManager
(OBM)
2406
RELATIONAL
BACKING STORE
(RBS)
2407
ORDER MANAGEMENT
SYSTEM (CoreOMS WITH
OpenBook EXTENSIONS)
2410
HTML
TEMPLATES
2403
WEB BROWSER
USER INTERFACE
(WBUI)
2401
RELATIONAL
DATABASE
SYSTEM
(RDBMS/Sybase)
2408

FIG._24